

## **Introduction**

The U.S. Department of Energy (DOE) *Hoisting and Rigging Standard* is intended as a reference document to be used by supervisors, line managers, safety personnel, equipment operators, and any other personnel responsible for safety of hoisting and rigging operations at DOE sites. The standard quotes verbatim or paraphrases (with minor editorial changes for consistency) the requirements of the U.S. Occupational Safety and Health Administration (OSHA) and the American National Standards Institute (ANSI). It also encompasses, under one cover, hoisting and rigging requirements, codes, standards, and regulations, eliminating the need to maintain extensive (and often incomplete) libraries of hoisting and rigging standards throughout DOE.

As indicated in the History and Background section, the use of the imperative voice (as in “Never use discarded load chain for slings”) or the word “shall” denotes a mandatory action, whereas use of the word “should” denotes a recommended action in keeping with best management practices.

From chapter to chapter, the reader may notice what appears to be excessive repetition. Such repetition, however, is by design, enabling the use of each chapter, if needed or convenient, as a stand-alone document.

The standard occasionally goes beyond the minimum general industry standards established by OSHA and ANSI; and also delineates the more stringent requirements necessary to accomplish the extremely complex, diversified, critical, and oftentimes hazardous hoisting and rigging work found within the DOE complex. In doing so, it addresses the following items which are not covered in detail in the general industry standards:

1. Management responsibility and accountability
2. Operator/inspector training and qualification requirements
3. Definition of critical lifts and the additional requirements for making them
4. The need and responsibilities of a person-in-charge for critical lifts
5. The need and responsibilities of a designated leader for ordinary lifts
6. The definition and special requirements for preengineered production lifts
7. Special requirements for the testing, inspection, and maintenance of hoisting equipment in hostile environments
8. Nondestructive testing/nondestructive examination requirements for such items as hooks, welds, and spreader bars
9. Special requirements for inspection and load-testing of hoisting and rigging equipment/accessories
10. Hook latch requirements for cranes, slings, and rigging accessories
11. Design standards for such equipment as cranes, forklifts, and hooks
12. Operating practices for hoisting and rigging operations
13. Rigging information and load tables
14. Good and bad rigging practices.

## **DOE-STD-1090-99**

Because the possibility of serious accidents resulting in personnel injury or death or significant property damage exists whenever hoisting and rigging take place, the requirements for these operations must be clearly defined and precautions ensured, including proper preplanning, extreme care, attention to detail, teamwork on the part of trained operators/riggers, and the use of equipment that is reliable, properly designed, inspected, and maintained. Although not mandatory at all DOE sites and locations, this standard has been used for many years by DOE and its contractors as a valuable resource for conducting hoisting and rigging safely and efficiently and as the standard against which to judge all hoisting and rigging programs. The full implementation of the requirements and recommendations of this standard will dramatically strengthen hoisting and rigging programs throughout the DOE complex and will significantly decrease the probability of serious accidents resulting in personnel injury or death or severe property damage.

To propose improvements to the standard, please use the copy of the form at the back. All requests or suggestions for improvement should be submitted to:

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U.S. Department of Energy  
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